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# The Term

"If they were so inclined, they could impeach him because they don't like his necktie."—Attorney General William Saxbe.

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MIT, CAMBRIDGE, MASSACHUSETTS

FRIDAY, MARCH 1, 1974

FIVE CENTS

## MIT to launch fund drive

By Paul Schindler and John Kavazanjian

MIT is making plans for a massive fund-raising campaign that may begin as early as the spring of 1975.

The Tech has learned that the drive will rival the Second Century Fund (which raised \$98 million in the early 1960's) in size, if the final decision is made to go ahead.

Administration officials, while conceding that the drive is under consideration, contend that no final decision has been made as to its size, priorities, or timing.

Possible priorities for the drive were considered at the December meeting of the Corporation Development Committee, which was led by Chairman of the Corporation Howard Johnson.

Johnson told *The Tech* that the December meeting was the normal annual meeting of the committee and that it had "good attendance, and was a full day meeting."

Pros and cons of a major campaign were discussed, according to Johnson, but no definite time for the drive, or final amount, was set. Indeed, he added, it is still unclear whether there will be a campaign. The decision will be made, Johnson said, by the start of the 1974-75 school year.

One consideration, according to Johnson, will be major fund drives by other schools. Stanford, CalTech and Wellesley have already publicly announced major drives, and other schools which compete with MIT for students are rumored to be considering major drives.

A new major drive might include ongoing fund raising efforts, including the new undergraduate dormitory, the new hockey rink, and financial aid.

But its concentration would more likely be on the areas which a major drive most effectively supports: general funds and endowment.

One positive result of a largescale increase in the Institute's endowment could be a deceleration of the increase in tuition. This is because the Institute's deficit, a major factor in the high tuition rises of recent years, can only be met with "free funds" — endowment and tuition. A substantial increase in the endowment might be expected to help hold tuition costs and increases down.

Second Century Fund

The last major drive at MIT was the Second Century fund, called by the New York Herald-Tribune, "The most successful major college fund raising effort ever." The fund set \$66 million as a target and proceeded to collect \$98 million in a three year period ending in 1963.

Led by its Chairman, the late Alfred P. Sloan Jr. '95, the fund financed the last major building expansion on the Institute campus. Among the expansion projects were the \$6 million Green Building, the \$6 million Center for Materials Science and Engineering (Building 13), the \$4 million Student Center, the \$4 million Center for Space Research, and the \$6 million Center for Life Sciences. Also coming out of the Fund was the \$2,020,100 designated for McCormick Hall and numerous faculty chairs. In exceeding its goal, the fund even recieved \$1 million which finally saw its designated use in the Dreyful (chemistry) Building in 1970.

The Second Century Fund is generally considered in fundraising to be the blueprint for the perfectly planned and executed fund drive, not just for colleges, but in all such appeals.

Since 2nd Century

"It has been our fund-raising policy for the last 10 years to have small, pointed campaigns with specific targets," Johnson said. "We could stay on that track. It's been right so far. But as we look ahead, there is a need to generate more endowment."

Johnson said that endowment can't really be built with a small, pointed campaign, at least not in the kind of large numbers which the Institute needs under current financial conditions.

"We need unrestricted funds for the five schools, and general faculty salary support, among other things," he added. Johnson pointed out that the Alumni Office put out a report in the mid-1960's that suggested that the pointed campaign policy would work for a decade, but that another major campaign would be needed around 1975.

He concluded, "I think our friends will respond to a major drive with clear program goals and a clear need. More endowment might be one major solution to our operating gap problems; it has been one in the past."

## Equity level to stay at \$1750 next year

By Bert Halstead

The Student Financial Aid Office has announced that "the individual self-help component of each aid award will remain at \$1750" for the second year in a

The self-help component, often referred to as the "equity level," is a major factor in determining the amount of the scholarship a needy student will receive from the Institute.

Financial Aid Office director Jack H. Frailey estimates that the cost of attending MIT will rise by \$500 next year, to a whopping \$6150 plus travel costs. This is due to a combination of factors: the tuition increase from \$3100 to \$3350, and the soaring costs of fuel in dormitories, which are expected to add another \$250 or so.

H. Eugene Brammer, director of the Housing and Dining Services, states that even this figure is only the best available estimate. The decision on room rents has yet to be finalized, and the determination of next year's

commons prices is even further

In light of these cheerless tidings, MIT's resolve to hold the equity level constant shines as a bright spot in the outlook for the coming year, but it has a cost. The funds the Student Financial Aid Office would normally get from the Institute are accordingly to be augmented by half a million dollars. The increase comes from two sources. Somewhat less than half comes from unrestricted income, the same income that is already being sorely taxed by inflating energy costs. The rest comes out of a "rain barrel" fund-that MIT normally adds to every year. The purpose of this fund is to provide a reserve in case extraordinary circumstances require it. Frailey characterized the release of this money to the Financial Aid Office as "unusual," but explained that the cost jump for the coming year is extraordinary chough to justify

(Please turn to page 3)

#### News Analysis

### Requirements split humanities

By Mike McNamee

(Mike McNamee, News Editor of The Tech, has been reporting on the review of the Humanities and Social Science requirement since October. This is the second of two articles analyzing that requirement. — Editor)

The introduction of the proposed Humanities and Social Sciences requirement (detailed in *The Tech*, 2/22) has caused controversy over the meaning and value of having a requirement in these areas.

This controversy, which was

evident throughout the planning of the proposed requirement, was the subject of lengthy discussion at last week's faculty meeting when the proposal was introduced.

The basic disagreement is over the importance of requiring students to take strictly humanistic subjects. Several members of the faculty of the Humanities Department have maintained that the new requirement should stress subjects of that nature. The proposed requirement does not include any such provision; it does not require that students take subjects from any particular fields.

Associate Dean of the School of Humanities and Social Sciences Donald Blackmer stated last Wednesday that he considered "the elimination of implicit hierarchy of fields in the old requirement" one of the important accomplishments of the new requirement. Dissenting

In the statement of the new Humanities and Social Sciences requirement printed in *The Tech* of February 22, page 3, one of the Fields was inadvertantly left out. The Field of Visual Arts and Design should be added to that list. *The Tech* regrets the error.

members of the School's faculty, however, disagree with Blackmer on this point.

"What no one seems to realize about this requirement," Assistant Professor of Humanities Murray Biggs told The Tech, "is that it makes it possible for a student to go through four years at MIT without ever taking a subject with humanistic content." Humanistic content. Humanistic content is defined by Biggs and other Humanities faculty as concern with the study of human values, historical content, developing skills in writing and emphasis on class discussion.

#### Why a requirement?

The need for a requirement in Humanities and Social Sciences was one of the first points discussed by the faculty at last week's meeting. Professor of Physics A. P. French stated that he had come to the conclusion that "the existence of requirements is not constructive - I feel that if subjects are there as offerings, students will take them." French added that he was concerned with the question of Institute requirements in general, not just the Humanities and Social Science requirements.

Dean Harold Hanham of the School of Humanities and Social Sciences replied that the require-(Please turn to page 3)

## Gas lines may force rationing

By Mike McNamee

Rationing or some other form of retail distribution control of gasoline might be the only way to cut gas wastage caused by long lines at service stations.

According to researchers in Mechanical Engineering, motorists who are forced to cruise around looking for gasoline and then wait in long lines to buy it are wasting hundreds of thousands of gallons of gas each day in Massachusetts alone. The only way to stop this wastage, they say, will be to impose rationing.

Research by Associate Professor John Heywood, Professor James Keck, and Lawrence Linden G. all of Mechanical Engineering, shows that drivers who "top-off" their tanks with many small purchases might waste a substantial percentage of their purchase in looking for a station and waiting to buy the gasoline.

By computing standard gasoline mileages for various types of cars, the team was able to calculate the gasoline wasted by a driver who drives a certain number of miles and waits in line for some length of time to buy gasoline. For instance, they cited the "typical" case of a driver who goes three miles out of his way and waits 30 minutes to buy gasoline.

That driver, according to their research, would have wasted one-half gallon of gasoline. If he bought six gallons — \$3.00 worth at 50 cents per gallon — he would have wasted 8 per cent of his purchase.

#### The Oregon Plan

"The odd-even plan and the minimum purchase rule that have been set up in some states (the so-called Oregon Plan) is helping cut the wastage," Heywood told *The Tech*. "The rule discourages people from cruising around to buy one gallon of gasoline."

Heywood attributed the savings from the Oregon Plan to the minimum purchase rule, which requires a motorist to purchase at least \$3.00 worth of gasoline whenever he buys gas. "The odd-even plan makes people conserve what is in their tanks," he said, "but we feel that the minimum-purchase rule is most important."

Massachusetts instituted the Oregon Plan in February, just after Heywood, Keck and Linden completed their research. Heywood said that he was uncertain of how well the rules are being enforced, but added that some savings should result from the reduction in lines at gas stations.

Increased allocations for the Northeast and savings through the Oregon Plan have resulted in many predictions that the worst of the crisis is over for Massachusetts. Heywood said that this optimism was not too well founded: "It's a pity that people keep saying the crisis is over. It raises expectations about how much gasoline will be available, which in turn puts even more pressure on the limited supplies."

Heywood added that people in the petroleum industry had told him that the shortage "will probably last through the sum-



Motorists in Massachusetts are wasting hundreds of thousands of gallons of gasoline a day waiting in long gas-station lines like this one. MIT researchers say that rationing might be the only way to save this gas.

# MIT cars "soft touch" for thefts according to patrol chief Olivieri

By Stephen Blatt

While there has been a reduction in most categories of crimes committed on the MIT campus, auto thefts are continuing at a steady rate.

Campus Patrol Chief James Olivieri attributed the reduction in crimes to recent Campus Patrol innovations such as Operation Identification and increased patrol coverage of the campus. However, these efforts have apparently made no dent in the car theft situation.

The number of auto thefts, which has remained at a constant level of 130 per year (11 per month) for the past few years, rose sharply in December to 26, dropped to 20 in January and stood at 14 for the first three weeks of February. To fight this rise in car thefts, Olivieri is working with the Cambridge Police Department to provide more coverage for the high crime areas.

According to Olivieri, a large number of auto thefts could be avoided by simple preventative measures. "MIT is a soft touch" as regards car robberies, he says. Part of the problem is the carelessness of car owners. "People just walk along, trying each car until they find one that is unlocked. They then 'jump' the

#### NOTES

- \* Notice to students applying to medical school for September, 1974. Please inform the Preprofessional Advising & Education Office (Room 10-186, ex 3-4158) of the status of your applications. This information will be useful in advising future applicants to medical school.
- \* Kaleidescope is coming April 19 and 20. Want to help? Plan an activity? Create ideas? Call 3-2696.
- \* Nominations for the Goodwin Medalist are now being accepted by the Dean of the Graduate School, Please submit the names of any candidates to Dean Irwin W. Sizer, Room 3-136, before Monday, April 1, 1974. Nominations may be made by any student or faculty member and submitted through the Head of the nominee's department, the undergraduate Association, or the Graduate Student Council. The Goodwin Medal is awarded in recognition of conspicuously effective teaching by a graduate student who is either a Teaching Assistant or an Instructor. Further information may be obtained by calling extension 3-4869.

ignition and drive off."

The cars that are stolen most often are Fords and Mustangs. "These are the easiest models to snake a wire through the rubber around the windows and hook onto the button," Olivieri says.

Of the culprits that are apprehended, the majority are fifteen to nineteen-year-olds who live within 2 miles of MIT. The primary purpose of the thefts is for "joy rides."

The majority of auto thefts occur on Memorial Drive and Amherst Streets near the West Campus dorms. Other high-theft areas include the parking lots on Albany Street near the National Magnet Laboratory and near the cyclotron. While the largest number of thefts occuring the evening (51 of the last 113), as many thefts occur during the daytime as overnight (30 and 32 respectively out of the last 113).

The reductions in other crimes are due in part to the Campus Patrol Escort Service, to Operation Identification, to the formation of a bicycle compound and to increased patrol coverage on campus, Oliveri said.

The Escort Service is for the benefit of those people working in remote areas and/or after normal hours. These people may, by calling the Campus Patrol obtain a patrolman to escort them from their office to parking areas or bus stops. Operation Identification, involves engraving ID numbers onto pieces of equipment and has reduced the theft of items such as typewriters.

A bicycle "parking lot" has been established near building 13, where people may park their bikes from 8am to 6pm. The bikes are guarded by student employees.

The number of police officers patrolling the campus has been increased. There are now 3 patrolmen on West Campus and 4 on East Campus, up from 3

and 2 respectively. "By increasing manpower we were able to reduce patrol times, make our response time faster, and raise our deterrent ability because of increased visibility of officers," reports Olivieri. The two women officers recently added to the Campus Patrol staff give the Campus Patrol "better effectiveness in dealing with problems involving women."

Publicity has also aided in reducing crime. "The Police Blotter of The Tech is very helpful—people in the community should be aware of what's going on and what precautions they have to take," says Olivieri. Special Bulletins, which are posted in areas where a large number of similar crimes have been taking place (for example in a dormitory), are "an on-the-spot report of what's happening specifically attuned to a particular location."

Other problems facing the Campus Patrol besides auto thefts include the "open building" policy of MIT, master keys and live-ins. The fact that MIT buildings are open 24 hours a day, while advantageous to people working all night, makes it difficult to police and leads to vandalism, especially of the vending machines. According to Olivieri, Servend-Seiler, which owns the MIT vending machines, suffered a \$48,000 loss last year in vandalized machines.

The continued use of illegally duplicated master keys, despite an amnesty period last year when all such keys were supposed to be turned in, "we find very detrimental to the personal property factor as far as the dorm system is concerned," reports Olivieri. The live-ins and free guests situation in the dorms also makes it difficult to differentiate between people who belong in a particular place and outsiders.

### INTERACTIVE LECTURES

Ten in all, by Morrison, Lettvin, Sagan, Wood, Margulis, and Siever. With numerous answers to interesting questions. May be heard any time at Polaroid, 740 Main St. For further info, please call Karen Houston at 864-6000, ext. 2800.



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Answers:

1.— False

2.- True

3.- False

**FALSE** 

4.- False

### News Analysis

### Humanities: are there enough?

(Continued from page 1) ment was a way of "setting aside a part of the student's week in which he can involve himself in something different from his normal studies." The requirement should help a student broaden his interests and "become a civilized person," Hanham added. A requirement was necessary to fulfill this goal, he concluded, because it insured that the student would take the time necessary for these subjects.

#### Amendments

Four amendments were offered at the faculty meeting which were intended to direct the requirement towards the humanistic side. The first two, offered by Associate Professor of Humanities William Watson, restricted the Distribution subjects in the new requirement to subjects concerned with human values, critical reading, historical background, writing, and class discussion. They also required that class sizes in Distribution subjects be small enough to encourage class discussion and evaluation of writing assignments.

Head of the Literature Section, Professor Wayne O'Neil, offered an amendment varying the composition of the committee which would evaluate the Distribution subjects to put more faculty for the School of Humanities and Social Sciences on it.

The fourth amendment, proposed by Biggs (who later told

The Tech the amendment would probably be dropped) would restrict the Distribution and Concentration subjects of the requirement to subjects offered by the School of Humanities and Social Sciences. The current proposal allows those subjects to be drawn from any of the Institute's five Schools.

Many of the faculty members at the meeting seemed to be displeased in general with the requirement, especially with the lack of strict criteria for the Distribution subjects. Blackmer stated that "it would be difficult to evolve language that would be binding on the committee (that would evaluate Distribution subjects)." Blackmer added that he felt the necessary restrictions "are implicit in the spirit of the committee's charge. It would infringe on the rights of the fields to do what they want to do if we were more specific," he concluded.

Watson, on the other hand, stated that "the reasoning behind the courses should be written into the catalogue, so that students can read it." This reasoning, he added, should emphasize the study of humanistic subjects.

### MII's 'rain barrel' fund will keep self-help down

(Continued from page 1)

The Financial Aid Office was forced to make one concession to inflation, however. It has increased its summer earnings expectations by \$100 across the board, to \$600 after expenses for the pre-freshmen. The corresponding figures for presophomores, -juniors and -seniors are \$800, \$900, and \$1000. Says Financial Aid, "This increase appears to be justified in the light of the actual experience of MIT students during the past summer."

There will be no major changes in the procedure used to determine the expected parental contribution, other than a

normal cost-of-living adjustment. Frailey said he does not expect the proportion of students on financial aid to rise significantly because of holding down the equity level, but the average scholarship grant is expected to rise from \$1700 to somewhere between \$1900 and

\$

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James Q. Wilson, Prof. of Government at Harvard, spoke at the Cambridge Forum Wednesday on "Crime: where have we been and where are we going?"

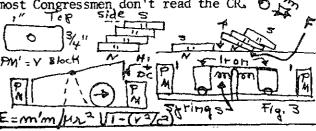


"Brain Teaser or E ≠ mc2" You can build a Per- reason repelling magnets weaken much faster manent Magnet prime mover (PMpm) for 25¢ that than attracting magnets. 7. It is almost impgives back & forth motion to a steel ball bea- ossible to pull the keeper directly off a larring. ANYTHING in motion has energy including ge horseshoe magnet. It is easy to slide this teemy molecules of air or water which turn presented for the shield has the right angle slower than the shield has the right and the shield has the shield had t opellers. Get 2 button ceramic magnets 1/2" in ide force while the steel ball gets the direct diameter & 3/16" thick whose poles are on the large flat surfaces. Determine distance magnet attracts a 1/2" diameter ball bearing. To make a magnetic shield cut a 1" square from a tin can (iron) & put thin cardboard on each side of it. (Fold the cardboard off a safety match cover.) Try 6 things, underlined later, then Scotch tape the magnets to cardboard, etc. the distance apart a magnet attracts the steel ball plus the thickness of the shield. Put ball between magnets & shield between ball 5 minutes until the air they move & the fric-& the magnet ball is touching. Ball STARTS FROM REST & goes to other magnet. Repeat at other magnet. We now have reciprocating motion th the 2 button magnets if you try long enwhich can be converted to circular (piston to crankshaft) but we must operate the shields by hand & there is an impact & loss of heat when the ball strikes the magnet. This HEAT LOSS can be prevented by having the ball compress springs. The springs are arranged so the ball doesn't quite strike the magnet. (Substitute cart on wheels with iron at each end for steel ball. See Fig. 3.) Will a PMpm produce useful output? Does the

steel ball compressing springs get enough motion & force to operate the shields & have output left over?? Is there energy in a magnet's field which we have never bothered to use before ??? Would we have had this simple device, we always hear the simpler the better, decades find 99.9% of the people who say this device ago if kids had always been taught #2 ????

Things we know about magnets: 1. A magnet will attract a like magnet or a steel ball of similiar size about the same distance. 2. Two like magnets repel 5 times further than they attract & this DIFFERENCE is useful energy. Hold like poles tightly together & release 1 magnet at a 45 degree angle. 3. Two magnets on opposite sides of a thin sheet of iron (shield) STICK TO the iron. 4. Substitute the steel ball for one of the magnets & it sticks much, much less, if at all. 5. With only 1 magnet and a steel ball the steel ball CAN NOT be repelled. 6. Springs not only prevent a heat loss but allow the repulsion of a steel ball. For some E=m'm

force plus the release of the compressed springs. 8. Another word for the shield's slide or shear force is to call it a conservative force. With a conservative force an object in motion stays in motion except for friction losses. 9. To demonstrate a right angle conservative force like that on the shields which can have very low friction losses arrange 4  $1'' \times 3/4'' \times 3/16''$  magnets as shown. On a smooth hard surface these 3 magnets will bob for tion at the fulcrum (F), which is the center of a circle, stops them. (You can do this wiough.) la The mechanical layout of the 25¢ device allows us to take advantage of all of the above facts. 11. We know a steel ball can be made to go back & forth between 2 electromagnets but this takes more electricity than the steel ball could generate. 12. Iron has more molecules which can be magnetized in a very strong magnetic field than we can permanently magnetize in any known magnetic material. 13. Whether on a chair or on the ground 1 lb. of iron puts 1 lb. of tension in springs. If this same 1 lb. of iron is within 1 1/2 feet of a 15 lb. horseshoe magnet the tension in springs varies between 1 oz. and 350 lbs. 14. If you ask properly, you will will not work did not previously apply #2. 15. PMpm's don't quit at sunset or when the wind calms down. For further details of the shields write your Congressman & ask for pages E5749 & E5750 from the 12 Sep 73 Congressional Record. You are asked to do this as most Congressmen don't read the CR. O 3



Notes: If physics is vitally concerned with motion should #2 be taught in high school? If yes--get E\*mc2 in your high school paper & as many other magazines & papers as you can. Post on bulletin boards, send to friends at other colleges, etc. Make copies & hand out to waitees in gas lines. Scientists & Congress must be convinced there is unending & clean energy in a magnet's field which can be tapped.

### In Case of Insomnia -Overpopulation:

By Storm Kauffman

The case for birth control

In the past two weeks, The Tech has run several articles dealing with the possible development of worldwide food shortages. The basic problem is the same for this and all of the other deficiencies with which the US and the world have begun to be afflicted: too many people.

The population boom is a well publicized event. In fact, it was the US crisis of the late sixties (just as energy and inflation are the crises of the early seventies). Much of the interest in the US died off when the Census Bureau reported (misleadingly) that the American fertility rate had dropped to the replacement level (2.1 lives births per woman is the rate necessary to maintain a stable population

However, even in the US (where the fertility rate is now down to about 1.98), population growth has not ceased. At present, there are roughly twice as many girls entering the child-bearing ages (at about 13 years) as there are women leaving (at about 40). This means that if every woman continues to replace only herself and her partner, the population will grow to approximately 320,000,000 (half again as many as in 1974) in the 70 years before zero population growth (ZPG) is reached. Thus, to acheive a stable population it will be necessary to maintain the fertility rate at about the replacement level for the next 70 years (forever, actually).

As a result of our apparent success at limiting births, much of the research into improved contraceptive means has been curtailed. But a look at the growth figures for the rest of the world will show why work must continue to find a safe, foolproof (doesn't require any bookkeeping to take) method of contraception.

According to Tomas Frejka (Scientific American, March, 1973), the prospects for worldwide ZPG are not good. Most developed countries can reasonably be expected to reach replacement fertility within two decades, but in the less developed areas Frejka places a 50 year minimum on attainment of low fertility. Result: minimum world population of 8 billion in 2050 (now about 3.7 billion).

While North America has a growth rate of 1.2% per year (the population increases by this factor each year), other areas (Asia 2.3%, Africa 2.6%, and Latin America 2.9%) have much higher rates. Only Europe and the USSR are lower with 1.0%.

The reason why under-developed areas have high birth rates is that they also have high mortality rates. Parents have many children in an attempt to guarantee that several will survive into hardy livelihood and be able to support their parents in old age. There is also the general (bullshit) status symbol of having "many strong sons" or proving virility (male) by fathering many children.

Developed nations and the governments of over-populated countries must make an effort to convince these people of the importance and the advantages of reducing the size of their families. At the same time, an easy method of birth control must be available to be given to those who wish it.

As for those who are prohibited by their religions from practicing birth control, their only hope is that their religious leaders realize the importance of population control and ease the restrictions.

The difficulties lie in convincing people that birth control is not genocide. in altering living conditions and mortality rates so that large families are not used as old age insurance, and in developing a workable method of easy contraception.

Now is the time to get busy.

## Nixon: lots of people cheat on taxes

By Norman D. Sandler

For those of you who did not see President Nixon's news conference Monday night, take heart; you missed very

Many persons tuned in early, expecting - or wanting - to see a fierce confrontation between the President and the press corps he avoids. However, the confrontation never really took place.

Although he stumbled several times during the delivery of his prepared statement and looked gravely ill. Nixon handled himself well during the 30-minute Q-and-A session with White House reporters.

He was right up to par, dodging questions, holding his temper and stressing the fact that he was the president, and would continue to salvage the presidency from the stigma of Watergate, regardless of the consequences.

The big slip of the evening, as many people learned later, was when Nixon defended taking tax deductions for the donation of his vice presidential papers to the national archives.

Other people, he said, have taken tax deductions for the donation of their papers, including MIT President Jerome Wiesner and Harvard economist John Kenneth Galbraith. Both are well-known Democratic liberals and Nixon obviously chose the occasion to show that Republicans aren't the only ones who cheat on their taxes.

However, the White House staff had slipped up. Prior to every news conference, the President is extensively briefed by his staff on issues which are expected to be raised by reporters. "Rehearsals" are held, during which questions are posed to Nixon, and his responses formulated by staff researchers.

This time they were wrong. Digging through a Scripps-Howard article published in December, the Nixon staffers found that Wiesner had indeed donated his papers from 1961-64 to the Kennedy Library, and assumed he had taken tax deductions in exchange.

But the White House was called in its poor research work at Tuesday morning's regular press briefing. CBS correspondent Dan Rather asked deputy press secretary Gerald Warren about Wiesner's comment that he had taken no such deductions for his papers, and Warren was forced to admit the staff had fouled up adding that the President "regretted the error."

Besides the Wiesner incident, there was very little other news to come out of Monday's session. The President said (as expected) that he differed with the House

Judiciary Committee's definition of impeachable offenses, not that the House has been waiting for Nixon's direction on the matter.

Nixon managed to ease himself through Monday's news conference, but by the end of the week, he again stood as a President sitting on the brink of political disaster.

Last week, an obscure Democrat -Richard F. VanderVeen - scored a stunning upset over the Republican favorite in winning Vice President Gerald Ford's congressional seat. The seat has been held by Ford for 25 years, and has belonged to the Republican Party since 1912.

VanderVeen - campaigning on Republican involvement in Watergate - took a majority of the vote cast in Michigan's fifth congressional district, and in doing so has sent the Republican Party into a state of panic.

The GOP leadership realizes that VanderVeen won the seat largely due to Watergate. It takes little imagination to expect that other Democrats will pick up on the VanderVeen strategy in November, tying their GOP opponents to the scandal-ridden Nixon Administration.

Nixon met with top Republicans last week after the Michigan vote, and will certainly be under increasing pressure to resign to save the party as the November elections approach.

Nixon said Monday night that he did not expect to be impeached, and told the American public he felt evidence of criminal activity was necessary before the House could impeach him.

However, the House Judiciary Committee, which is looking into the matter for the entire House, doesn't agree with Nixon's interpretation of the Constitution, and it's the Committee's interpretation that really counts.

Staff counsel John Doar and Albert Jenner have presented the Judiciary Committee with a 49-page report which essentially gives it the authority to determine what constitutes an impeachable offense. The staff report offers a definition of impeachment which will allow the Committee to consider a wide range of charges: against the President.

In addition, the Committee is beginning to gather its own evidence. The first official request for evidence has been submitted to White House lawyers, who are currently bargaining with Committee lawyers to determine what type of documents will be turned over for the impeachment inquiry.

For some reason, many Republicans are having trouble reading the Committee's subpoena authority. Members of the GOP leadership and White House lawyers talk of turning over documents they feel are "necessary" to the investigation, even though the Committee's charge mentions nothing of a condition that evidence must be necessary.

The White House will attempt to limit the Committee's investigation as much as possible. However, armed with broad authority to subpoena White House documents, Judiciary Committee Chairman Peter Rodino, D-N.J., presently has the leverage to force the President and his attorneys to cooperate on a limited basis.

If Nixon doesn't comply with the Committee's formal requests and subpoenas he can be held in contempt of Congress. He knows that, and he is not going to be enthusiastic about being slapped with a contempt citation that itself could lead to impeachment or help push the articles of impeachment through the House.

Continuous News Service

## Since 1881

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March 1, 1974

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## Of comets, "Oort's Cloud," and other celestial things

By Fred H. Hutchison

Who erased the comet?

What happened to Kohoutek, the "Comet of the Century," the fiery ball which would "outshine the moon and stars" and spread its glowing tail across a "full sixth of the evening sky?"

A friend of mine claims that Kohoutek was entrusted to the White House where the President's personal secretary may have accidentally erased five days of it while answering phone calls.

Gilbert T. Schmidling, Chairman of the Optical Division of the Amateur Astronomers Association says that NASA wanted to "Keep space in the news," and raised the public's hopes for "celestial fireworks" too high.

I tend to think that the comet was handled by the same people who did the world's largest, er... I mean the giant yo-yo, and we all know what happened to that . . .

While these three hypotheses are interesting, they're based on little scientific fact. To obtain a more sound explanation as to why Kohoutek fizzled, we need to turn the clock back almost a full year to when the comet was still some 400 million miles away from the sun.

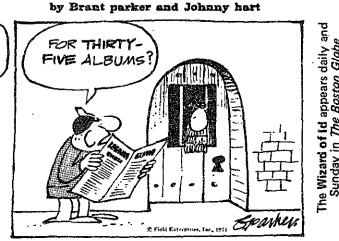
It was last March that Dr. Lubos Kohoutek of the Hamburg Observatory in West Germany was the happy victim of a double irony. In 1971, Kohoutek was searching a section of the sky for the remnants of Comet Biela when he discovered a covey of asteroids. Now he was looking for his group of asteroids again and photographed a comet.

(Continued on the next page)

THE WIZARD OF ID







# How do you discover what MIT is all about?

By Barb Moore

"Tech men wear gray pants and red socks and act like Giles' Goat Boy."

Since 1971 people have been reading this opening description of MIT students in the self proclaimed "only handbook that tells you what's really happening at major colleges in the US."

The author of this inaccurate, libelous mess The Underground Guide to the College of Your Choice, is Susan Berman, and she botches the description of almost every aspect of an MIT education.

For instance, did you know that you must score over 790 on the SAT math test in order to be admitted? Or that there are "no spiffy dressers or freaks?" And that you have a good chance for survival only if you are a computer? For more insights into life at MIT, just see Berman's book.

I am not, however, suggesting that you go out and buy a copy. Berman has lived off the morbid curiosity of non-MIT students long enough without your contributing to her royalties. Rather than being amused at such degrading descriptions, I find her writing disgusting.

The MIT image of illiterate, toolish outcasts has long been perpetrated by such people as Berman. Despite the efforts of the Admissions and News offices there are still remnants of this old image around, as demonstrated by her book.

The idea of the "MIT coed" lives on, also. Berman states flat out that the "chicks are very, very ugly." The new "revised" edition of another handbook by *The Yale Daily News* states, "The popular sentiment is that there are four 'girls' (one per class) and 396 'coeds' at MIT."

I don't know what it will take to live down these misconceptions. The Association for Women Students has prepared an effective booklet on women which was mailed to potential women students, and this is a firm step toward making the image obsolete. But evidently it will take more than this. Don't feel left out, men. Berman has some fine remarks about you, too. Merely by applying, you have identified yourself as a "Dr. Strangelove type," and most of you freshmen have never had a date in your lives, according to Berman. One of her finest remarks, though, is that "most hardly ever fuck and seldom date."

As a final comment on admissions, Berman says, "If a small green being fit the admission grid, he'd get in and have his hands full of studying."

Just to prove how "underground" she is, Berman scatters stereotypical comments throughout the book. I admit that I am criticizing outdated terms in a three-year-old book, but anyone who would ever have the pretentiousness to name a book the "Underground Guide" to anything deserves criticism. To prove how "with it" she is, she says (under the sub-head "Brothers and Sisters") that "ratio cats:chicks — 15 to 1," and chicks can get BC pills at student health."

The new guide by Yale is a vast improvement over Berman's efforts, however. The editors of this guide evidently talked to someone who went to MIT to get their information. The description of subject matter is accurate, and of social life fair. They conclude that "neither the US Government nor the stuffy alumni run the school." I'm not sure just how stuffy the alumni are, but the description is an improvement overall.

It escapes me how such poor writing and nonexistent research as Berman's book can get so far on the modern market. She says that there were "reputed" to be 18 suicides on campus in 1970, as an example of her comprehensive research.

Maybe people will eventually catch on and stop paying good money for such trash as this book. We can hope that soon afterward people will stop believing allinclusive stereotypes, and we will not all be labelled "scientific types-absent minded... with wrinkled cotton shirts."

### Letters to The Tech

#### Blood drive

To the Editor:

I would like to thank you for your article, in Friday's Feb 8 The Tech, and to note a misconception promoted by the article and its headline. For the past couple years, we have been spreading our donations throughout the year instead of concentrating them at one drive. While the spring drive totals have been going down in that time, our total donations have increased steadily. Now that a system of two major and two minor drives each year has been istablished, we hope for each drive's performance to improve.

Thank you very much.

Gail M. Rubin, Chairman

Spring 1974 MIT Red Cross Blood Drive

### Kendall Square I

To the Editor:

In a January 23 story by Michael D. McNamee ("Kendall Square: redevelopment problem"), O. Robert Simha, Director of the MIT Planning Office, is quoted as stating with respect to the Kendall Square redevelopment project, "We have a general feeling that (MIT) people want more shops and stores and restaurants near MIT, but no one has come up and told us this." This statement has profoundly disturbing implications.

At a meeting of the Kendall Square Task Force which I attended on February 5, Mr. Simha, in response to my question, denied making this statement. Nonetheless, the MIT position stated by Mr. Simha and Walter Milne, Special Assistant for Urban Relations to the MIT President, seems to imply just this goal. Unfortunately, the Task Force has been unable to obtain from MIT a clear statement of its concrete objectives in the Kendall Square area.

What has surfaced of MIT's position to date, however, seems to fly directly in the face of a unanimous Cambridge City Council order of last summer which directed the Cambridge Redevelopment Authority "to institute a development plan for the Kendall Square Area that will

create and provide maximum blue collar (including non-professional white collar) jobs for Cambridge residents."

This apparent MIT posture is particularly serious for two reasons. First, MIT's reported ability to certify approximately \$3.8 million in additional "Section 112 credits" gives it virtual veto power over any proposed development. Second, MIT's corporate representatives claim to represent the entire Institute community, not only without being so authorized by most of the members of that community, but also apparently without making any serious attempt to ascertain their specific desires concerning Kendall Square.

I cannot believe that the MIT administration intends to attempt to impose its will in direct defiance of the Cambridge community's expressed interests. I certainly hope that, instead of doing so, it will communicate its specific intentions to the Task Force as soon as possible, an action which is long overdue.

David E. Sullivan '74 Democratic Ward Committee

### Kendall Square II

To the Editor:

John Tiemstra may work in Kendall Square, but he doesn't seem to be too familiar with its problems. Even though I have not been following the issue very closely, I still noticed a number of inaccuracies in his article in last Tuesday's [Feb 12] The Tech.

In the first place, it is just not true that industry left Kendall Square voluntarily through "the slow process of technological change." It left because it was evicted by the federal government and by the CRA. In the mid-1960's, when Aerospace was big, the federal government bought and cleared many blocks of industrial land about Kendall Square for a new NASA research center. Just as the first building was being completed, the research center folded. The Department of Transportation now occupies the NASA building; but only about a fourth of the NASA land was ever built upon. The rest has lain vacant for many years and is one of the key parcels now under consideration. In its turn, the CRA has done its share of kicking out industry by buying plants and warehouses through eminent domain. This is why the area is so dilapidated today: faced with imminent condemnation, what company would want to spend money on upkeep or maintenance. Many of the falling-apart buildings have been empty for years, their former occupants evicted by the new owners, the CRA.

The fact is that industrial firms are interested in the Kendall Square land. The city took a survey last fall and found potential users for nearly all of the land that is available — by asking only those firms that are already located in Cambridge. Many of these firms said that they needed to expand their plants, and that unless new industrial land were developed in the city soon, they would be forced to move away. Land is available in Kendall Square: since the theory of urban renewal is to sell the land at a loss anyway, what does it matter if it is sold for offices or for industry?

Finally, it may be important for offices of technological firms to be close to each other, but it is also important for factories to be near their workers. This is especially true for low-income people who cannot afford the expense of an automobile. (Housing is not the only cost factor which prices poor people out of the suburbs.) Since most technological workers can afford cars, and since many of them already live in the suburbs, it would seem more practical to rebuild Kendall Square for the people who live nearby instead of for people from Lexington.

Tiemstra's article [Commentary] seems like just another attempt to depoliticize MIT by making the important issues sound unimportant. Even though he professes concern for the blue-collar residents of Cambridge, it rarely shows. His bias in favor of Tech Square-type offices over factories is visible throughout the entire article. But that bias is somewhat understandable. After all, I presume he works in one of those offices.

Charlie Bahne '74
Department of Urban Studies
and Planning

## Kohoutek: snowball fizzles as fireball

(Continued from previous page)

Since most comets have been discovered by amateur astronomers using small telescopes, they are not usually observed until they're much closer to the sun. But Kohoutek, photographing with a powerful 32-inch Schmidt telescope, picked up Comet 1973 f (as it is now logged) when it was between the orbits of Jupiter and Mars, some nine and a half months away from the sun. Because of this extremely long lead time, many elaborate research projects were set up to observe this 'fiery intruder.'

Beyond a general curiosity, several specific questions about comets and the nature of the universe were hoped to be answered by a systematic, detailed investigation of Kohoutek.

First, astronomers wanted answers to questions about cometary composition. The two more widely accepted theories characterized comets as either 'dirty snowballs,' or 'flying sand bunkers.' Many major radio telescopes searched 1973 f for the characteristic microwave spectrum lines of different molecules, in hopes of confirming the more popular 'snowball.'

French observers using the big Nancay array were the first to announce detection of the hydroxyl (OH) molecule in an extended region of the comet's head. This was followed by reports from the National Radio Observatory and MIT's Haystack Hill radio telescope of the detection of water vapor in the head of the comet. A further confirmation of the concept of comets as 'snowballs' came on January 16 when Dr. Gerhard Herzberg and his co-workers at the National Research Council of Canada announced positive identification of several red lines emanating from Kohoutek's tail as those produced by ionized water molecules.

Of even greater significance in the efforts to unlock the secrets of the universe was the announcement made by B.L. Ulich and B.K. Conklin in early December that they had found a close pair of emission lines which they attri-

buted to methyl cyanide (CH<sup>3</sup>CN). The two astronomers, using the 36-foot NRAO radio telescope on Kitt Peak in Arizona, reported in January that they had also detected the characteristic signature of hydrogen cyanide (HCN). Both molecules have also been detected in the vast dust clouds near the center of the galaxy.

This fact gains importance if the most widely accepted theory of comet formation is valid. According to this theory, comets are pieces of primordial junk resting in a distant cloud somewhere in the dark, frozen region of space that stretches beyond Pluto toward the stars.

Affectionately dubbed "Oort's Cloud," most of this expanse of frozen material is concentrated in a shell some 4.6 million million miles from the sun. (This is still far distant from the Galactic center.)

Some time in the past, Kohoutek experienced a decrease in its orbital velocity which caused it to slowly accelerate toward the sun. Travelling some 250 million miles an hour on December 28 when it reached perihelion, Kohoutek is now constantly decelerating as it leaves the solar system.

If, as I said, this theory of cometary formation is legitimate, then the presence of the two types of cyanide molecules in the nucleus of Kohoutek and in the dust clouds near the center of the galaxy suggest the universality of large molecules which many believe to be the forerunners of life.

The discovery of these two molecules, which decompose into daughter particles (radicals) unless they are frozen, also tends to give added weight to the 'dirty snowball' hypothesis.

These facts about cometary composition may help to explain why Kohoutek didn't materialize into the "Greatest Fiery Chariot of All Time."

Some astronomers are now saying that while Kohoutek was a snowball, it wasn't very dirty. Both Comet Bennett (1970) and Halley's Comet released long streams

of dust particles upon melting, which appeared as orange and yellow bands because of reflected sunlight.

Kohoutek, however, has turned out to be a relatively clean comet. One explanation is that since this was its first trip through the inner solar system, the comet may have flared up briefly when it was first observed in the vicinity of Jupiter. Warmed by the heat of the sun, the more volatile particles may have boiled off when observation of Kohoutek was obscured by daylight for five months.

After its reappearance on September 23, many astronomers revised their earlier predictions of the comet's magnitude, saying that it would be significantly dimmer.

Why, when it was generally known in astronomical circles by mid-October that Kohoutek's fiery glow was to be more like that of a solitary firefly, was the American public so solidly sold on the "Comet of the Century" concept? Maybe for the Nixon gang, a year of Watergate was enough.

As Gilbert Schmidling said, "People nowadays say comets don't mean bad news as people used to think long ago, but since Kohoutek was announced, a Vice-President has resigned, we've had the Saturday night massacre, a stock market crash, and an energy crisis. It even has the power to erase tapes!"

Although Kohoutek proved to be a visual disappointment for those of us who peered into the metropolitan murk for a glimpse of this elusive fireball, from a scientific viewpoint, it was, if not the "Comet of the Century," at least the best observed one.

If we learn anything from Kohoutek, it should be that predicting comets is pretty tricky business. But then I should have guessed that the comet Kohoutek was going to be a dud when I heard the Burl Ives song of the same name.

Aw, what the hell — Halley's comet is supposed to come back again in another twelve years. Right now, however, I wouldn't bet on it.

### Police Blotter

Police Blotter is a weekly compilation of Campus Patrol Activities on and off the MIT campus. Items for the Blotter are selected by the Patrol.

2/22/74 - 4:15pm

Larceny of a woman's handbag. Complainant reports that she had been sitting on a bench in the second floor of the Student Center when persons unknown stole her handbag. Handbag contained \$10.00 cash, eye glasses, checkbook plus the usual identification cards, etc.

2/23/74

Patrol reports the arrest of two trespassers in duPont Locker Room,

2/25/74 - 8:45am

Larceny of a large metal sign, from Building 37. Complainant reports the theft of a sign reading "Center for Space Research" which was taken from a wall outside of building 37-271. This sign had been securely bolted to the wall and is valued at approximately \$70.

2/25/74

Report of larceny of photo prints. Complainant reports the theft of two photographic prints from the 4th floor corridor of Building 4. These prints were 24" X 20" and illustrated the passage of a bullet through the flame of a candle. Painters working in the area also report the larceny of two drop cloths from their supplies. It can be assumed that the drop cloths were used to wrap the pictures to facilitate their removal from the building. 2/26/74

Report of the Larceny of an oscilloscope. Complainant re-

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Feb. 28, Mar. Mar. 2 1974 8pm

ports the theft of an oscilloscope from 10-050 and describes it as blue in color, 12" X 18" X 24", approximately 25 lbs., serial number 002523, trade name Tektronix, with EE 10-470 stenciled on side, valued at \$650.00 when purchased new in 1962.

2/27/74 Larceny of telephones. Complainant reports the theft of two black six button telephones from Building 14N sometime between 5:00pm, 2/26/74 and 9 am, 2/27/74. No sign of forced entry.

2/27/74

Larceny of clothing, Complainant reports the theft of personal clothing from her office in Building 39. Theft occurred sometime between 2:00pm and 5:20pm this date. Clothing had been hanging on rack near door and could be seen from corridor. Value approximately \$55.00

Patrol reports 81 ambulance runs for month of February. Month of February total number of car thefts from vicinity of MIT - 15.

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## INTERVIEWS INTERDATA

Wednesday, March 6

## COMPUTER SCIENCES

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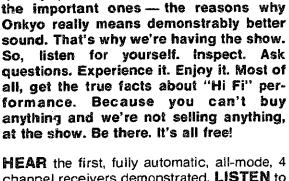
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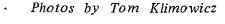
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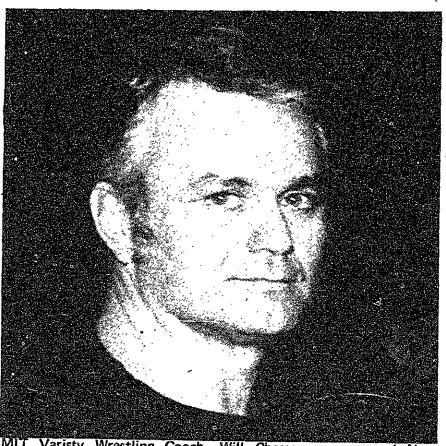


# Blittle Spirit









MIT Varisty Wrestling Coach, Will Chassey, was named New England wrestling coach of the year by the N.E. Intercollegiate Wrestling Association. Photo courtesy Athletic Department

## Wrestlers 2nd in New England: Chassey named Coach of Year

Since 1947 the MIT wrestlers have finished their season with the New England Wrestling Tournament. The Tech wrestlers won the tournament in '47, and since then have placed second or third six times. Springfield College won the tournament in 1951, and has won it a total of 22 times. In 1973, Springfield won, beating Coast Guard and MIT, 116½ versus 81 and 70 respectively.

This year MIT wrestlers advanced into the finals, Co-Captains Ed "The Cobra" Hanley '74 and Rich Hartman '74, and heavyweight Erland Van Lidth de Jeude '76 who upset the defending heavyweight champion in the semi-finals. In addition four other MIT wrestlers placed. Jack Mosinger 275, last years runner-up at 118 finished fourth. Loren Dessonville finished third at 158, John Thain '77 finished fifth at 150, and Joe Tavormina '76 finished sixth at 177 after being injured.

The JV wrestlers finished

fourth in their tournament, with Werner Haag '77, Joe Scire '77, and Steve Brown '77 all placing second.

For the Varsity finals only one mat was used. The room lights were dimned, as flood lights lit the mat. Going into the finals, MIT was in second place with 871/2 points, Central Connecticut had 85½, and Coast Guard had 79½. Any of the three schools could have taken second. In fact, MIT only had three wrestlers in the finals, while both Central Connecticut and Coast Guard had 4.

Ed Hanley's bout was unusually close, considering Hanley's amazing record. During the dual meet season, Hanley had pinned Steve Long of Coast Guard. Surprisingly, at the start of the match, Long took down Hanley, only the second takedown against "the Cobra" all.

Going into the third period, Long was still ahead when Hanley rolled him to his back. This brought the MIT crowd to its feet, and Hanley held Long on his back until he was pinned. The exuberant Hanley promptly celebrated his victory with a bottle of champagne.

Rich Hartman '74 was the next MIT wrestler to appear in the finals. In 1973 Hartman had finished second to Rick Frogale of Williams. This year he faced Frogale again. This match was one of the closest of the evening. Neither wrestler scored a takedown in the first period. With Hartman starting up, Frogale escaped 20 seconds into the second period. Neither wrestler was able to take down the other. In the third period, Hartman

escaped in seven seconds, tying the score at 1-1 with no riding time. Hartman saw his chance, and presented Frogale with a steady barrage of takedown attempts. The referee met Frogale's feeble moves with a warning for stalling. A second warning would give Hartman a point and the match. Hartman continued to shoot, slipping once, and let Frogale get a takedown.

Hartman escaped instantly and the score was 3-2, Frogale. Hartman continued to go for the match-winning takedown, but slipped again and was taken down by Frogale. Hartman escaped again and tried one last time to bring Frogale to the mat. A final slip gave Frogale another takedown, two more points, and a 7-3 win.

Erland Van Lidthe de Jeude '76 was hoping for his second upset of the day, but Jim Murray of Coast Guard decisioned him 3-0 in the heavyweight

MIT finished second in the meet with 93 points to Central Connecticut's 90 and Coast Guard's 841/2. Springfield, with 1511/2 was the runaway champion, winning the New England's for the 23rd time in 24 years.

Coach Wilfred Chassey, who has coached the MIT matmen to a 123-60 dual meet record and four second place finishes in the New Englands, was awarded "Coach of the Year" honors by the New England Intercollegiate Wrestling Association, the first time he has ever gained such an honor. In an unusual scene at the presentation ceremony. Chassey was first congratulated by his collegiate coach.

## MIT fencers end season at 12-1

A sweep of its final three matches provided MIT's superb varsity fencing squad with a 12-1 recard and solidly entrenched the Engineers as the favorite in the upcoming New England tournament.

Wins at Baruch, 19-8, and

## Find Shits

By Dan Gantt

Were there ever a moment that I, in my feisty youth, pondered just what it would be like to be the sports editor of my college newspaper, never would I have imagined anything like MIT. Dreams of a seat in a press box high above the 50-yard line, of a free trip to a bowl game, of wintry evenings at mid-court reporting the heroics of the home team ranked in the top ten teams in the latest UPI basketball poll . . .

Few other schools could offer such a complete contrast to childhood imaginings. Halftime in the fall, is best remembered for the Lamb Chops kazoo band. Powerhouses such as Bates, Williams, and Bowdoin continually find their way onto Tech sports schedules.

Yet despite the fact that the hockey team has won fewer than ten games during the three seasons I've been here and despite the fact that I don't even know where half the schools MIT competes against are located, I have to admit an affection for the attitude towards athletics which permeates this place.

While the sole emphasis at other schools is on winning, MIT merely stresses participation, be it interscholastically or in intramurals. This is as it should be. Sports should be fun.

So who cares about the Rose Bowl anyway?

Stevens Tech, 15-12, last weekend on the heels of a triumph at home over WPI, 20-7, closed out the regular season.

The foil and sabre teams were outstanding against WPI, dropping only three matches. Robert Shin '77 led the squad with three victories in sabre, while Barry Williams '75 and Dong Park '75 each contributed two. Johan Akerman '77 and Rich Reimer '77 fencing foil and Chip Farley '75 in epee each chipped in with two individual

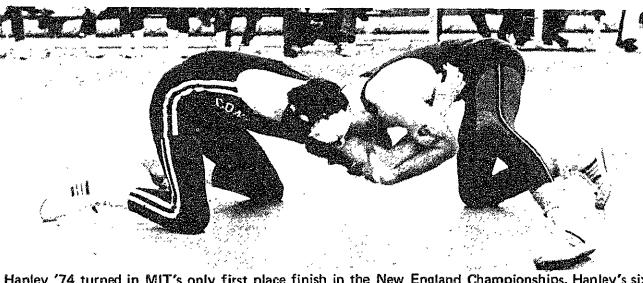
In the first match of the road trip. Baruch managed to keep the score close, trailing only 5-4 after the first round of fencing, but MIT then won nine out of eleven bouts to ice the match. Once more, the sabremen and boilers were superb, dropping only four bouts in these events.

Individually, Reimer won three bouts without a loss fencing foil, as did Park in sabre and team captain Chris Eckel '74

Most misleading is the score of MIT's 15-12 win over Stevens Tech. In fact, the Engineers dropped seven of the last nine bouts after pulling away to a commanding 13-5 lead.

Akerman and Reimer led the foil team with three and two wins respectively, while Farley and Eckel chipped in two each in epee.

This Saturday the team travels to Southeastern Massachusetts University in search of its fifth straight New England championship.



Ed Hanley '74 turned in MIT's only first place finish in the New England Championships. Hanley's six Photo by Tom Klimowicz tourney wins put him at 24-0 for the year.



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